## II. AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings, or versions, of claims.

1. (Currently Amended) A method comprising the steps of:

a. providing a floor schedule of an assembly unit for a device; ~~and~~

b. optimizing the floor schedule based on sensitivity data of the device during operation of the assembly unit on the floor schedule; and

operating the assembly unit based on the optimized floor schedule.

2. (Original) The method of claim 1, further comprising the steps of receiving the sensitivity data and optimizing the floor schedule in real-time.

3. (Original) The method of claim 1, wherein the sensitivity data includes at least one of electrostatic discharge sensitivity data, electrical overstress sensitivity data, latch-up data, hot electron data, mobile ion contamination data, and negative bias threshold instability data.

4. (Original) The method of claim 1, further comprising the steps of generating sensitivity data for the device of an assembly unit during operation of the assembly unit on a floor schedule; and receiving an optimal path data of the floor schedule based on the sensitivity data, wherein the optimal path data controls the path of the device through the assembly unit.

5. (Previously Presented) The method of claim 1, wherein step b) further comprises a step of prioritizing a testing of the device for sensitivities.

6. (Original) The method of claim 5, wherein the prioritizing step includes prioritizing the testing of a mask based on a size of a space on the mask.

7. (Previously Presented) The method of claim 1, wherein step b) further comprise a step of analyzing the sensitivity data of the device to estimate an amount of sensitivity of the device.

8. (Previously Presented) The method of claim 1, wherein step b) further comprises a step of analyzing the sensitivity data through at least one sensitivity model to estimate an amount of sensitivity of the device.

9. (Original) The method of claim 8, wherein the sensitivity model includes at least one of a human body model, a machine model, a charged device model, a transmission line pulse model, and a very fast transmission line pulse model.

10. (Previously Presented) The method of claim 8, further comprising a step of estimating a result of the at least one sensitivity model with a second sensitivity model in the case that data of the at least one sensitivity model is incomplete.

11. (Previously Presented) The method of claim 1, wherein step b) further comprises a steps of inhibiting a failed tool of the assembly unit based on the sensitivity data; and optimizing the floor schedule to avoid the failed tool.

12. (Previously Presented) A computer program product comprising a tangible computer useable medium having computer readable program code embodied therein for optimizing a floor schedule of an assembly unit for a device, the program product comprising:

program code configured to analyze sensitivity data for the device during operation of the assembly unit on the floor schedule; and

program code configured to optimize the floor schedule of the assembly unit based on the sensitivity data.

13. (Original) The program product of claim 12, further comprising program code configured to generate the sensitivity data for the device being assembled by the assembly unit.

14. (Original) The program product of claim 12, wherein the analyzing program code analyzes the sensitivity data through at least one sensitivity model to estimate an amount of sensitivity of the device.

15. (Original) The program product of claim 14, wherein the sensitivity model includes at least one of a human body model, a machine model, a charged device model, a transmission line pulse model, and a very fast transmission line pulse model.

16. (Previously Presented) The program product of claim 15, wherein the analyzing program code further estimates a result of the at least one sensitivity model with a second sensitivity model in response to that data of the at least one sensitivity model is incomplete.

17. (Original) The program product of claim 12, wherein the optimizing program code prioritizes a testing of the device for sensitivities.

18. (Original) The program product of claim 12, wherein the sensitivity data is received through a messaging system from at least one of the assembly unit and a testing unit.

19. (Original) An optimizer system comprising:

a model analyzer for receiving sensitivity data for a device of an assembly unit, and analyzing the sensitivity data during operation of the assembly unit on a floor schedule; and

a scheduling optimizer for optimizing the floor schedule of the assembly unit based on the analyzed sensitivity data.

20. (Original) The optimizer system of claim 19, further comprising a testing unit for generating sensitivity data for the device.

21. (Original) The optimizer system of claim 20, wherein the sensitivity data is received through a messaging system from at least one of the assembly unit and the testing unit.

22. (Original) The optimizer system of claim 21, wherein the testing unit further comprises a sensitivity monitor for generating sensitivity data; a reliability generator for generating reliability data having rules for the device and assembly unit; and a tool controller for invoking the sensitivity monitor and reliability generator and shutting down a testing tool of the testing unit.

23. (Original) The optimizer system of claim 21, wherein the sensitivity data is generated through at least one sensitivity model.

24. (Original) The optimizer system of claim 23, wherein the sensitivity model includes at least one of a human body model, a machine model, a charged device model, a transmission line pulse model, and a very fast transmission line pulse model.

25. (Original) The optimizer system of claim 22, wherein the scheduling optimizer further comprises: an automated material handling system dispatcher for optimizing the floor schedule in real-time based on the sensitivity data and the reliability data; and a maintenance scheduler for scheduling maintenance based on the sensitivity data and the reliability data.

26. (Original) A method comprising the steps of:

generating sensitivity data for a device of an assembly unit during operation of the assembly unit on a floor schedule; and

receiving an optimal path data of the floor schedule that is generated based on the sensitivity data,

wherein the optimal path data controls the path of the device through the assembly unit.

27. (Original) The method of claim 26, further comprising the steps of generating the sensitivity data and receiving the optimal path data in real-time.

28. (Original) The method of claim 26, wherein the sensitivity data includes at least one of electrostatic discharge sensitivity data, electrical overstress sensitivity data, latch-up data, hot electron data, mobile ion contamination data, and negative bias threshold instability data.

29. (Original) The method of claim 26, wherein the sensitivity data is transmitted through a messaging system.

30. (Original) The method of claim 26, wherein the generating step further comprises the step of generating at least one sensitivity model with the sensitivity data.

31. (Original) The method of claim 30, wherein the sensitivity model includes at least one of a human body model, a machine model, a charged device model, a transmission line pulse model, and a very fast transmission line pulse model.

32. (Original) A testing unit comprising:

a sensitivity monitor for generating sensitivity data for a device;

a reliability generator for generating reliability data having rules for the device; and

a tool controller for invoking the sensitivity monitor and reliability generator and shutting down a testing tool of the testing unit.

33. (Original) The testing unit of claim 32, further comprising a messaging system for transmitting the sensitivity data and reliability data in real-time.

34. (Original) The testing unit of claim 32, wherein at least one sensitivity model is generated with the sensitivity data.

35. (Original) The testing unit of claim 34, wherein the sensitivity model includes at least one of a human body model, a machine model, a charged device model, a transmission line pulse model, and a very fast transmission line pulse model.